

REMARKS

Claims 1-25 and 27-38 are active in the present application. Claim 26 is canceled.

Claim 1 is amended to state that component B) must be present in an amount of from 55 to 99% by weight. Support for the amendment is found in Table 1 of the specification. Independent Claim 1 is further amended to state that the fire resistant functional fluid can achieve a Factory Mutual 6390 fire rating of Group 1 or Group 2. Support for the amendment is found on pages 21-23 of the specification.

Claims 31-38 are new claims. Support for the new claims is found in Table 1 on pages 21-23 of the specification.

No new matter is added.

REQUEST FOR RECONSIDERATION

Independent Claim 1 is now drawn to a functional fluid. The functional fluid of the invention may be a fluid such as a hydraulic fluid that can achieve a Factory Mutual 6390 Group 1 or Group 2 fire resistance rating.

The functional fluid of the present claims offers substantial advantages over conventional functional fluids (e.g., lubricants and/or hydraulic oils). Most conventional functional fluids are based on or contain mineral oils which are notorious for their combustibility and lack of flame retardancy.

The functional fluid of the presently claimed invention is not required to contain a mineral oil. In fact, the functional fluid of Claim 35 “consists of” only those components recited in the claim. The term “consists of” is used in the claim to signal a closed claim wherein only those components explicitly recited in the claim may be present, notwithstanding the normal amount of impurities and/or other components conventionally present in such base materials.

Applicants draw the Office’s attention to the Declaration under 37 C.F.R. §1.132 submitted concurrently herewith. The Declaration provides a comparison of conventional mineral oil-based functional fluids with the functional fluids of the present invention. As stated by the Declarant, mineral oil-based compositions are unable to provide a fire resistant composition (e.g., a composition that may be classified in the Group 1 or Group 2 tier of the Factory Mutual 6390 SFP measure of flammability).

The Office rejected the previously presented claims in view of a publication to Liesen (US 2004/0092409). Applicants traverse the rejection and submit that Liesen does not disclose or suggest the presently claimed subject matter. At best, Liesen may disclose combustible oil-based compositions containing polymer/copolymer materials but not having the fire resistant properties of the claimed invention.

Applicants submit that the data provided in the specification and Declaration submitted concurrently herewith shows that Liesen does not suggest the presently claimed invention and cannot render the presently claimed invention obvious. For example, the Declaration provides evidence that a mineral oil-based composition cannot provide the fire resistant properties of the functional fluid of Claim 1.

Moreover, Liesen does not suggest or disclose that improved fire resistance is obtainable by including an oxygen-containing compound in the prior art composition in the amounts recited in present Claim 1. Applicants have demonstrated that it is critical for the oxygen-containing compound to be present in a major amount to impart fire-resistant properties to a functional fluid. Liesen does not recognize the benefits of such compositions, e.g., Liesen does not disclose that improved fire resistance can be obtained by substituting an oxygen-containing compound for the prior art mineral oil.

Applicants thus submit that the subject matter of Claim 1 is patentable over Liesen.

Moreover, Liesen does not disclose any of the oxygen-containing compounds of present Claim 30 or that the oxygen-containing compounds of Claim 30 may be present in the amounts recited in new dependent Claims 31-34. Although Liesen may disclose base oils in paragraph [0059] that include polyols such as neopentyl glycol, these materials are described as “made from C₅ to C₁₂ monocarboxylic acids” and do not encompass the oleate and/or tallate compounds recited in present Claim 30.

The Office rejected Claim 30, newly presented in the Amendment filed in the present case on November 18, 2005, by combining Liesen with Brois (US 5,646,098). The Office cited column 7, lines 4-6 of Brois as support that one of ordinary skill in the art would combine the oleates and/or other components of Brois with the copolymers of Liesen. Applicants note however that Brois discloses materials such as glycerol dioleate as an example of an unsaturated emulsifier or detergent (column 7, line 4). Applicants submit that

it would make no sense to include an emulsifier or detergent in a major amount (e.g., an amount greater than 50% by weight) in a functional fluid. Applicants submit that at best Brois discloses the inclusion of only minor amounts of an oxygen-containing compound in the prior art compositions.

Applicants thus submit that the combination of Liesen with Brois to reject the subject matter of Claim 30 as obvious is not supportable and should be withdrawn.

The Office further rejected the claims as anticipated by a patent to Roos (US 2003/0060587). Applicants traverse the rejection in view of Roos based on the same reasons for the traversal of the rejections in view of Liesen. Namely, Roos does not disclose or suggest a functional fluid having the fire-resistant properties and containing the oxygen-containing compounds recited in present Claim 1.

For the reasons discussed above, Applicants submit that all now-pending claims are patentable over the prior art of record and respectfully request the issuance of a Notice of Allowance.

Respectfully submitted,

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